

(V<sub>5</sub>) present lateral to the anal shield. Anal shield with 3 setae near anus, anus in ventral position. Many small, oval to round, sclerotized platelet like structures between the sternal setae. Tritosternum absent. Peritremes very small, 21–24  $\mu$  long, present between coxae III and IV. Parallel striations on dorsal and ventral membranous integument with dotlike spots more prominent than in larvae (fig. 11). Tectum rounded anteriorly. Movable digit of chelicera with 3 teeth (fig. 7). Number of setae on legs from coxa to tibia as follows: I. 2,4,10,8,8; II. 2,4,7,6,7; III. 2,4,5,6,7; IV. 1,4,4,6,7.

*Deutonymph*: Idiosoma 421–559  $\mu$  long and 308–389  $\mu$  wide at the widest point (5 specimens). Ten pairs of small setae on sclerotized podonotal shield and 1 pair of sublateral setae (r<sub>5</sub>) on the integument lateral to the shield in the podonotal region as in protonymph (fig. 8). Two pairs of pores and 2 pairs of setae, Z<sub>5</sub> being serrated and longest of all dorsal setae, on the pygidial shield. Setae J<sub>2</sub> on integument between the podonotal shield and pygidial shield.

Three pair of sternal setae ventrally between the intercoxal region and 3 pairs of setae (genital, V<sub>1</sub>, V<sub>2</sub>) anterior to the anal shield (fig. 9). Setae V<sub>5</sub> present lateral to the anal shield. Anal shield with 3 setae near anus, anus in ventral position. Tritosternum absent. Many small, oval to round, sclerotized platelet like structures between the sternal setae. Peritremes 26–31  $\mu$  long, present between coxae III and IV. Parallel striations on dorsal and ventral membranous integument with dotlike spots more prominent than in protonymph. Tectum rounded anteriorly. Movable digit of chelicera with 3 teeth as in protonymph. Number of setae on legs from coxa to tibia as follows: I. 2,4,11,8,8; II. 2,4,8,6,7; III. 2,4,5,6,7; IV. 1,4,4,6,7.

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### THE GENUS CRATEROCERCUS ROHWER

(HYMENOPTERA: TENTHREDINIDAE)

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ABSTRACT—A key and descriptions are given for five species of *Craterocercus* Rohwer. One new species, *C. furcatus* from Conn., N.J., and Ill., is described. This genus is found only in North America where two species occur in the West and three in the East. Species of this genus are associated with *Quercus*.

Rohwer (1918) revised *Craterocercus* and included six species, some of which were based on characters now found to be variable. Ross (1951) listed nine species in this genus. In the present paper, five species are recognized, one of them described as new. *Cratero-*

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*cercus* is found only in the Nearctic region and is associated with *Quercus* L.

#### Craterocercus Rohwer

*Craterocercus* Rohwer, 1911, p. 385; MacGillivray, 1916, p. 106; Rohwer, 1918, p. 162; Ross, 1937, p. 75; Ross, 1951, p. 35. Type-species: *Hemichroa phytophagica* Dyar. Orig. desig.

This genus is in the group of Nematinae in which vein 2A and 3A of the forewing curves up to meet 1A to form a small basal anal cell. It may be distinguished from other genera in this group by the following characters: antenna stocky and of about the same thickness throughout; 2nd antennal segment wider than long; clypeus deeply and circularly emarginate; malar space less than diameter of front ocellus; tarsal claw with an inner tooth; vein 2r present in forewing. The female sheaths of all species are short, rounded, and thick, and the lancets are heavily sclerotized with well defined lateral teeth. This genus is close to the European *Mesoneura* Hartig, but *Mesoneura* lacks the basal anal cell in the forewing.

Larvae are not available for study. Dyar (1898) described the larvae of *phytophagica* (Dyar), *albidovariata* (Norton), and *fraternalis* (Norton), but the specimens cannot be located and his descriptions do not permit characterization of the larvae of this genus.

#### KEY TO SPECIES

1. Abdomen entirely red; western; ♂ and ♀ ..... **cordleyi** MacGillivray  
Abdomen mostly black ..... 2
2. Abdomen with a basal yellow band; eastern; ♂ and ♀ .....  
..... **albidovariatus** (Norton)  
Abdomen entirely black dorsally ..... 3
3. Female ..... 4  
Male ..... 6
4. Lancet with 11 serrulae, 1st and 2nd serrulae far apart (fig. 2); western  
..... **albipes** (Cresson)  
Lancet with 9 serrulae, 1st and 2nd serrulae close together (fig. 3, 4);  
eastern ..... 5
5. Mesopleuron rufous; serrulae of lancet simple (fig. 4) .. **fraternalis** (Norton)  
Mesopleuron black; serrulae 4 to 8 of lancet with a large posterior subbasal  
tooth (fig. 3) ..... **furcatus**, n. sp.
6. Western (California, Nevada) ..... **albipes** (Cresson)  
Eastern (east of 100° meridian) ..... **fraternalis** (Norton)

#### *Craterocercus albidovariatus* (Norton)

*Hemichroa albidovariata* Norton, 1872, p. 81, ♀; Cresson, 1880, p. 39; Dalla Torre, 1894, p. 282; Dyar, 1898, p. 125; Konow, 1905, p. 49.

*Opisthoneura albidovariata*: Viereck, 1910, p. 588.

*Craterocercus albidovariata*: Rohwer, 1911, p. 385; MacGillivray, 1916, p. 106; Rohwer, 1918, p. 163; Ross, 1951, p. 35; Burks, 1958, p. 13.

*Hemichroa phytophagica* Dyar, 1898, p. 125, ♀, larva. **New synonymy.**

*Opisthoneura phytophagica*: Viereck, 1910, p. 588.

*Craterocercus phytophagica*: Rohwer, 1911, p. 385; MacGillivray, 1916, p. 106; Rohwer, 1918, p. 163; Ross, 1951, p. 35; Burks, 1958, p. 13.

*Craterocercus floridanus* Rohwer, 1912, p. 238, ♂, ♀; Rohwer, 1918, p. 163; Ross, 1951, p. 35. **New synonymy.**

Female.—Average length, 9.0 mm. Antenna and head black; clypeus and labrum whitish. Thorax black; pronotum, tegula, posttergite, and spot on each side of prescutum white to yellowish. Front and middle legs yellowish with each coxa and middle femur infuscate; back legs with coxa and femur black, tibia and tarsus yellowish. Abdomen black with at least terga 2 to 4 yellow, basal plates and 5th tergum yellow or black; lateral areas of each tergum and apical segment sometimes yellowish. Wings lightly yellowish infuscate.

Lancet as in fig. 5; 8 serrulae; teeth of 2nd annulus small; tooth above each serrula largest, rest of teeth of each annulus about subequal in size; dorsoapical margin protuberant.

Male.—Average length, 7.5 mm. Color similar to that of female except for mesonotum and basal plates which are usually black. Genitalia as in fig. 7, 11.

Types.—*H. albidovariata* Norton (♀) is type no. 10318 at the Academy of Natural Sciences of Philadelphia with the data "Tex." *H. phytophagica* Dyar (♀) is U.S.N.M. type no. 4130 with the data "7A" and "Collection H. G. Dyar." Dyar's "7A" is from VanCortlandt Park, New York. *C. floridanus* Rohwer (♀) is U.S.N.M. type no. 14593 with the data "Bisc. Bay, Fla."

Distribution.—Widespread in eastern North America: ARKANSAS: Washington, Co., April 17. CONNECTICUT: Windsor, May 14, 16, 23, 29. FLORIDA: Bisc. Bay; Jacksonville; Haulover, March 19; Tampa, April 21; Ocala, April 1. ILLINOIS: Herod, May 1; Carlinville. KANSAS: Manhattan, May 2; Riley Co., April 6, 12, bred from oak. NEW YORK: E. Marion, L.I., May 29; VanCourtlandt Park; Ithaca. TEXAS: "Tex." VIRGINIA: "Va."

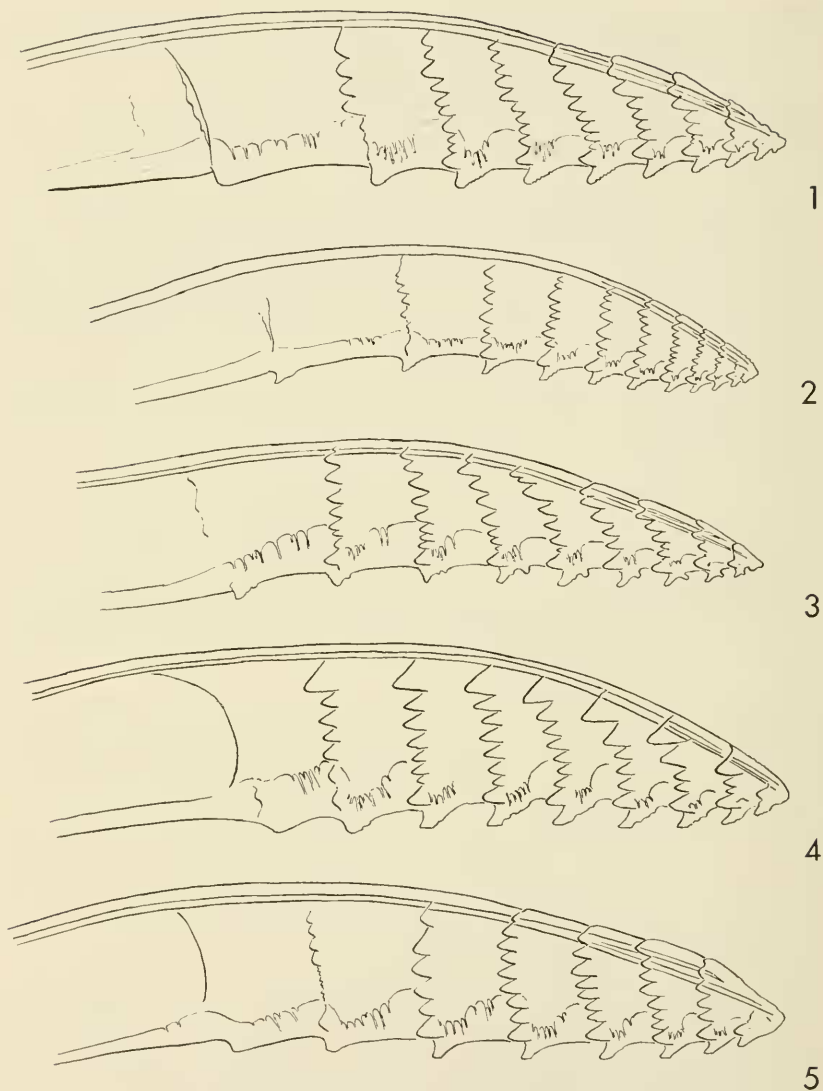
Host.—*Quercus* spp. Dyar (1898) reared this species from white oak and black oak "*Quercus coccinea*."

Discussion.—The yellow band on the dorsum of the abdomen and yellowish infuscate wings will distinguish both sexes of this species. The genitalia also offer good characters. Rohwer (1918) used the depth of the middle fovea, color of the basal plates, convexity of the supraclypeal area, shape of the ocellar basin, and shape of the stigma to separate *albidovariatus*, *phytophagicus* and *floridanus*. All of these characters are variable, consequently these names are considered to represent a single species.

#### ***Craterocercus albipes* (Cresson)**

*Mesoneura albipes* Cresson, 1880, p. 11, ♀; Dalla Torre, 1894, p. 184; Konow, 1905, p. 78.

*Craterocercus albipes*: Ross, 1951, p. 35.



Figs. 1-5. Lancets of *Craterocercus* spp.: 1, *cordleyi* MacG.; 2, *albipes* (Cress.); 3, *furcatus*, n. sp.; 4, *fraternalis* (Nort.); 5, *albidovariatus* (Nort.).

*Craterocercus californicus* Rohwer, 1917, p. 234, ♀; Rohwer, 1918, p. 163; Ross, 1951, p. 35 (= *albipes* Cresson).

Female.—Average length, 6.5 mm. Head and antenna black; labrum and maxillary and labial palpi whitish; clypeus white or black. Thorax black with pronotum and tegula white and spots on each side of prescutum yellowish;

mesopleuron and pectus entirely yellowish, entirely black, or with mesopleuron yellowish and pectus black. Legs entirely whitish; back tarsus infusate. Abdomen black above, yellowish below; sheath black. Wings hyaline.

Lancet as in fig. 2; 11 serrulae; 1st and 2nd serrulae far apart; teeth of each annulus about equal in size, tooth above each serrula largest.

Male.—Average length, 6.0 mm. Entirely black with labrum, all or part of pronotum, tegula, and each leg beyond basal half of femur whitish. Genitalia as in fig. 8, 12.

Types.—*M. albipes* Cresson (♀) is type no. 364 at the Academy of Natural Sciences of Philadelphia with the data "Nev." *C. californicus* Rohwer is U.S.N.M. type no. 19884 with the data "Eldorado Co., Cal., VI-09, altitude 8400', W. M. Giffard, coll."

Distribution.—California, Oregon, and Nevada: CALIFORNIA: El Dorado Co., June; Mill Valley, Marin Co., March 1, 6; Yosemite Valley, April 24, May 17; Paicines, San Benito Co., March 20, ex *Quercus agrifolium* Nees; Lyon's Dam, Tuolumne Co., June 6; Belden, May 1; Mt. Wilson, from *Ceanothus*, June 6; Lake Henshaw, San Diego Co., April 10. NEVADA: "Nev." OREGON: Jackson Co., Squaw Lk., 7 mi. E. Copper, May 19, 1962.

Host.—Probably *Quercus* sp. I swept an adult of this species from *Quercus* near Paicines, Calif., along with many *Periclista* Konow specimens which are associated with this host.

Discussion.—This species may be distinguished from *cordleyi* MacGillivray, the only other western species, by its smaller size, black abdomen, and genitalia. It may be separated from the eastern species by its smaller size, coloration, and genitalia.

#### ***Craterocercus cordleyi* MacGillivray**

*Craterocercus cordleyi* MacGillivray, 1923, p. 9, ♀; Ross, 1951, p. 35.

Female.—Average length, 8.0 mm. Antenna and head black; labrum and maxillary and labial palpi whitish. Thorax black with pronotum and tegula red. Front and middle legs red with each tarsus infusate; back legs with coxa and femur red, tibia and tarsus black. Abdomen red with basal plates and sheath black. Wings hyaline.

Lancet as in fig. 1; 9 serrulae; 1st and 2nd serrulae far apart; teeth of each annulus about equal in size, tooth above each serrula largest.

Male.—Length, 7.0 mm. Color similar to that of female. Genitalia as in fig. 9, 13.

Type.—MacGillivray's type (♀) is in the collection of the Illinois Natural History Survey with the data "Corvallis, Ore., May 6."

Distribution.—California and Oregon: CALIFORNIA: San Diego Co., Apr. 20; hills near Fairfax, March 31; Mt. Diablo, Contra Costa Co., April 22; Hopland, April 14; New Cayama, Santa Barbara Co., March 29. OREGON: Corvallis, May 6; 5 mi. N.W. Corvallis, May 12; Griffin Creek, Jackson Co., May 3.

Host.—Unknown.

Discussion.—The red abdomen, pronotum, tegula, and legs will separate this species from other *Craterocercus* species. The male is described and illustrated from a single specimen from "S. Cal."

***Craterocercus fraternalis* (Norton)**

*Hemichroa fraternalis* Norton, 1872, p. 81, ♂; Cresson, 1880, p. 39; Dalla Torre, 1894, p. 283; Dyar, 1898, p. 124; Konow, 1905, p. 50.

*Craterocercus fraternalis*: Rohwer, 1911, p. 385; Rohwer, 1918, p. 163; Ross, 1951, p. 35.

*Craterocercus quercivorus* Rohwer, 1918, p. 164, ♂, ♀; Ross, 1951, p. 35; Burks, 1958, p. 13. **New synonymy.**

*Craterocercus cervinus* MacGillivray, 1923, p. 9, ♀; Ross, 1951, p. 35. **New synonymy.**

*Craterocercus circulus* MacGillivray, 1923, p. 9, ♀; Ross, 1951, p. 35. **New synonymy.**

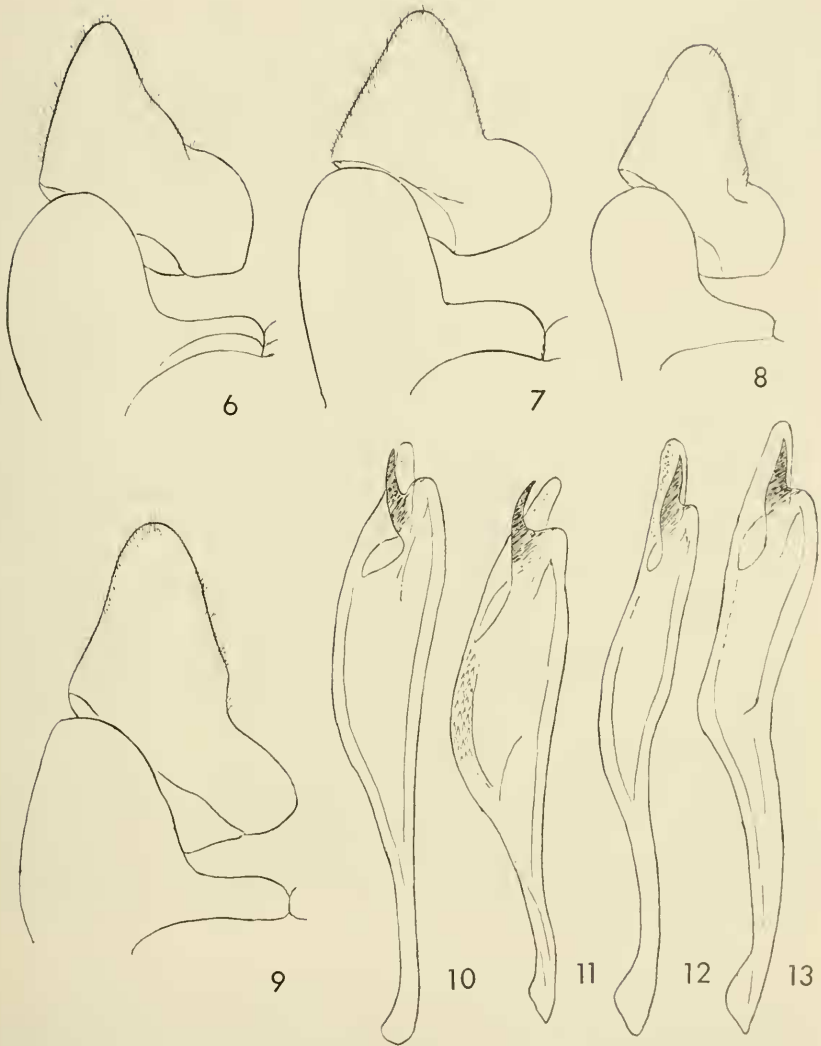
Female.—Average length, 8.0 mm. Antenna and head black; labrum and maxillary and labial palpi whitish. Thorax black with pronotum and tegula white, most of mesopleuron rufous, prescutum entirely reddish or black with margins reddish, scutellum black, posttergite reddish or black, metanotum reddish or black. Front and middle legs entirely whitish; back legs with coxa and femur mostly black, tibia and tarsus whitish. Abdomen black, basal plates and front margin of first several terga sometimes reddish, lateral portions of terga and sometimes apical sterna reddish; sheath black. Wings hyaline.

Lancet as in fig. 4; 9 serrulae; dorsal tooth of each annulus larger than rest of teeth.

Male.—Average length, 7.0 mm. Entirely black with labrum, maxillary and labial palpi, pronotum entirely or partly, tegula, and all legs, except for each coxa and basal part of each femur, whitish. Genitalia as in figs. 6, 10.

Types.—*H. fraternalis* Norton (♀) is type no. 10319 at the Academy of Natural Sciences of Philadelphia with the data "697." In the original description, Norton (1872) stated the specimen was from Texas. *C. quercivorus* Rohwer (♀) is U.S.N.M. type no. 21702 with the data "FA" and "H. G. Dyar Collection." Rohwer (1918) stated the type was from Bronx Park, New York City, New York. MacGillivray's types are at the Illinois Natural History Survey: *C. cervinus* (♀) has the data "Durham, N. H., 1937, W. and F.," and *C. circulus* (♀) has the data "Lake Forest, Ill., J. G. Needham."

Distribution.—Widespread in eastern North America: CONNECTICUT: Windsor, May 10, 14, 16, 17, 19, 23; Lyme, May 1; Mansfield, May 1, *Quercus*. ILLINOIS: Lake Forest. INDIANA: Demotte, May 15. KANSAS: Manhattan, May 3. MASSACHUSETTS: Eastern, June 6, *Quercus alba* L.; N. Saugus; W. Springfield, May 15; Wellesley, June 6, 13; Lunenburg, April 27, *Quercus alba*; Natick, April 5, *Quercus alba*. MICHIGAN: Ag. Coll., May 13; E. Lansing, May 5; Reed City, June 1; Manistee, June 15. NEW HAMPSHIRE: Durham. NEW YORK: Ithaca, May 5, 8; Orient, L. I., Aug. 26; Selden, May 23;



Figs. 6-13. Male genitalia, *Craterocercus* spp. Figs. 6 & 10, *fraternalis* (Nort.): 6, harpe & parapenis; 10, penis valve. Figs. 7 & 11, *albidocariatus* (Nort.): 7, harpe & parapenis; 11, penis valve. Figs. 8 & 12, *albipes* (Cress.): 8, harpe & parapenis; 12, penis valve. Figs. 9 & 13, *cordleyi* MacG.: 9, harpe & parapenis; 13, penis valve.

Bronx Park; Pelham Bay Park; Franklin Park. OHIO: Minerva, May 14. PENNSYLVANIA: Hunter Run, June 6; Spring Br., May 9. TEXAS: "Tex." WISCONSIN: Madison, May 19.

Host.—*Quercus* sp. Labels on specimens indicate this species has

been reared from *Quercus alba*, and Dyar (1898) also reared this species from white oak.

Discussion.—The mostly black abdomen, reddish mesopleuron, reddish areas on the mesonotum, and lancet characters will separate the females of this species from others. The male is easily separated by the coloration and genitalia. Rohwer (1918) separated *quercivorus* by the head sculpturing and color of the prescutum and abdomen, all of which are variable characters.

***Craterocercus furcatus*, n. sp.**

Female.—Length, 8.0 mm. Antenna and head black; labrum and maxillary and labial palpi whitish. Thorax black with upper margin of pronotum and tergula white; small spot on each side of prescutum whitish. Each front and middle leg beyond coxa whitish with femur and tibia infuscate; back legs with coxa and femur black, tibia and tarsus whitish. Abdomen black, apical sterna sometimes whitish. Wings hyaline.

Lancet as in fig. 3; 9 serrulae; 4 to 8 each with a large posterior subbasal tooth; annuli 3 and 4 slightly divergent; teeth of each annulus of about same size, tooth above each serrula largest.

Male.—Unknown.

Holotype.—Female, Brown's Mill Jc., N.J., May 13, 1906. U.S.N.M. type no. 69982.

Paratypes.—CONNECTICUT: Windsor, May 16, 1951, James B. Kring (2 ♀♀). ILLINOIS: White Heath, May 1, 1938, herbs No. 2a (1♀); Villa Ridge, April 17, 1883 (1♀). All deposited at the Illinois Natural History Survey, Urbana.

Host.—Unknown.

Discussion.—The black mesopleuron and abdomen and the furcate appearance of the serrulae of the lancet will separate this species from all other *Craterocercus* species. There are no associated males; however, the male may be similar to that of *fraternalis* and could be masquerading under that species name.

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#### FOURTEEN NEW CHRYSOMELID BEETLES FROM JAMAICA

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ABSTRACT—Fourteen new species in nine genera of chrysomelid beetles are described from Jamaica.

The following new beetles were described from the collection at the Science Museum, Institute of Jamaica at Kingston, from the Canadian National Collection at Ottawa and from Mrs. Anne Howden's collection.

***Oedionychus jamaicensis* Jacoby**  
(Fig. 5)

*Oedionychus jamaicensis* Jacoby, *Proc. Zool. Soc. London*, 1894, p. 621.

In his description of this species Jacoby wrote that it was the only *Oedionychus* in Jamaica. Recently I have described a second one, *O. gurneyi*, from this island. Because I had not seen any specimen of Jacoby's species in any collection until I examined the Howden col-